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Mr. Winship here attempts to present in a hundred pages all that the average reader needs to know about a subject concerning which there has been a wide gulf between popular writings and the opinions of expert students. He gives the accepted views, or in some matters of controversy the interpretation which he believes will come to be accepted, based on the bibliographical investigations of recent years, but without intruding on the reader any of the apparatus of scholarship. There are no footnotes, and no discussions of moot points in fine print, although an occasional hint creeps into the text to suggest where the reader can go to verify a statement. The narrative goes straightforwardly, with an occasional picture where no verbal description could show clearly what the text means. Though straight, it is not a narrow path, for in almost every section there is sometimes a sentence or sometimes a paragraph which reveals how largely the makers of books contributed to, and how they were influenced by, the economic, industrial, social, religious, and intellectual aspects of the renaissance and the reformation.

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Gutenberg to Plantin

An Outline of
The Early History of Printing

BY

GEORGE PARKER WINSHIP

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Third Impression

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Preface

THE study of the early history of printing has entered upon a new phase since the World War. It is a double phase, divided by the year 1500. The accumulated information of all that happened before that date is being coördinated, but the results must be held as tentative until the completion of a new catalogue of fifteenth-century books. For the sixteenth century, a beginning has been made, but nothing more, toward bringing together widely scattered data.

A hundred years ago, Ludwig Hain made it possible to study fifteenth-century books intelligently, by printing descriptions of 16,300 titles known to him. Half a century later, Henry Bradshaw showed that the proper way to classify these titles, in order to get at the hidden story of printing, is to group the books from each press in their chronological order. Robert Proctor, in the eighteen-nineties, applied this method to the "Fifteeners" in the British Museum and Bodleian libraries, locating with brilliant intuition nearly half of the total number that were published without any name of place or of printer, or date. Proctor's work revealed for the first time the details of how printing spread over Europe. It made possible the systematic classifica-

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tion of existing data, and it stimulated the search for documentary material by which to test the inferences derived from the internal evidence of the books themselves.

A somewhat chaotic mass of information accumulated in widely scattered places, too large for easy assimilation and at the same time insufficient in most cases for certainty in deductions. The problems involved in the effort to understand just how the earliest typographers worked, and what they accomplished, became clearer as the difficulties increased of reaching satisfactory answers.

The accumulated information lay fallow through the four years of war. When the study of the material was taken up again, about five years ago, with minds freshened and freed of many old assumptions, more definite ideas and surer deductions became possible. These ideas and deductions are still far from certainties, for they have not been subjected to the critical reëxamination which every attempt to reconstruct the past requires.

This outline aims to be a statement of facts which have in most cases long been established, with as much of the newer conclusions drawn from these facts as seems to the author reasonably certain of eventual acceptance. Controversial details have usually been ignored, because any discussion of pros and cons, or even an intelligible statement of the points at issue, would destroy the proportion of the

narrative by giving these subjects more space than they deserve.

Another reason for ignoring controversies about fifteenth-century matters is the appearance of the first volume of the "Gesamtkatalog der Wiegendrucke," prepared by a commission appointed by the German government in 1904. This work will take the place of Hain, which has held the field unchallenged for a century. The first volume contains half as many more titles than Hain. The new entries are those of less familiar works, frequently in the vernacular languages, and are from every point of view more significant to the student than the publications in Latin, of a religious character, which bulk so largely in lists of Incunabula. The corresponding portion of Hain is a little over one twentieth of the whole number of entries, so that the estimate of ten years before the new "Gesamtkatalog" will be completed seems conservative. But until it is finished and the necessary indices of places and printers appear, every statement about the first half century of printing must be held as subject to revision as soon as the definitive data become available for study.

Fifteenth-century books have been a subject for studious attention for more than two hundred years. Nothing comprehensive or systematic has yet been done for those of the sixteenth century. The Bibliographical Society has listed English books to 1640, and the British Museum has printed the

Spanish and French sections of what it is hoped will be a catalogue of its books dated before 1601. Other works are listed by J. B. Childs in "A Bibliography of Literature describing Books printed between 1501 and 1601," issued by the Bibliographical Society of America in 1923. A foundation for further study was laid by D. B. Updike in his "Printing Types," 1922, with its discriminating comments on the characteristic work of each country.

Alfred W. Pollard, long of the British Museum, is responsible for most of the statements in this outline, particularly for the method by which I reached conclusions in a few cases radically different from his. I have, with his permission, repeated in a few cases his phrasing of certain statements, without quotation marks, because I cannot express these things as accurately and convincingly as he has done. My interest in fine books began when I first came upon a book written by him, and it has grown as our acquaintance ripened into friendship.

I am indebted also to the Club of Odd Volumes, for this is an elaboration of its "Catalogue of an Exhibition Illustrating the Varied Interests of Book Lovers, 1450–1600," held at its club house in Boston during March, 1922.

George Parker Winship

Harry Elkins Widener
Memorial Library

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AN OUTLINE OF THE HISTORY OF PRINTING 1450-1600

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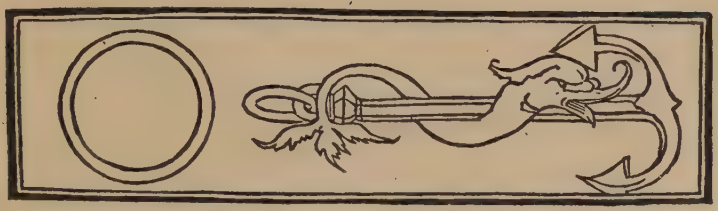
Potest vt vna vox capi aure plurima: Linunt ita vna scripta mille paginas.



THE INVENTION OF TYPOGRAPHY

1440–1456

JOHN GUTENBERG invented printing before the middle of the fifteenth century. Typography is a more correct term, for what he did was to construct the apparatus for making movable metal letters or type and for using these to produce many copies, all alike, of a book.

Gutenberg was a native of Mainz, whose youthful activity in local politics led to his retirement to Strassburg, where his experimental work on the invention was done. There, according to the testimony of witnesses in a lawsuit in 1439, Gutenberg produced something, the precise character of which he kept secret, but which he was able to sell. Ten years later a Mainz banker, Johann Fust, became interested in the invention and provided money to pay for the paper, wages, and other things required to produce copies of a large Bible. This was completed before August 15, 1456, for on that date the

vicar of one of the nearby churches wrote a note at the end of one of these copies, which is now in the Bibliothèque Nationale, to record the fact that he had finished rubricating and binding the whole work.

This is known as the GUTENBERG, the MAZARIN, or the FORTY-TWO-LINE BIBLE, from the printer, the owner of the copy which was recognized as being the FIRST PRINTED BOOK, or the number of lines on a page. The number of lines is a usual means of identifying early books when, as in this case, there is no printed name of place or printer, or date. This Bible consists of 641 leaves (or twice that number of pages), 16½ by 12 inches, bound in two volumes. Forty-one copies, more or less complete, are still to be seen, according to a "Catalogue raisonné des premières impressions de Mayence," compiled in 1911 by Seymour de Ricci for the Gutenberg Gesellschafft. Eight of these are now in American public or private libraries.

PETER SCHOEFFER, who became the most skilful printer of that century, may have been employed by Gutenberg, perhaps as the foreman of the shop, while the Bible was printing; it is equally likely that it was his executive capacity — a quality the inventor lacked — which brought to completion the great undertaking. This involved the management of six presses, of which two or three were in use for nearly the full period from 1450 to 1456, each with its crew of two or three workmen besides the com-

positor who set the type for the page which was to be printed next. In a well-organized shop there would also be type-casters to maintain a supply of letters, and workmen to look after a regular supply of blank paper and the proper drying and storage of the printed sheets. Someone, possibly a local ecclesiastic, must have made certain that the text was correct after it was set in type. Presumably a bindery was added to the other activities after the first half of the book was finished.

JOHANN FUST, on November 6, 1455, established by legal proceedings that he had advanced money to Gutenberg five years earlier. This undoubtedly shows when the work began, and also when it was approaching completion. Two years later the type used for printing the Bible was in Fust's possession, and he also had copies of the book for sale. Gutenberg's name at about the same time is entered on a record for non-payment of interest on other debts of long standing. In 1465 the inventor was pensioned by the Archbishop Adolph of Mainz on account of the service which he had rendered. When he died, at the beginning of 1468, a Dr. Homery laid claim to the type and other apparatus that he had been using.

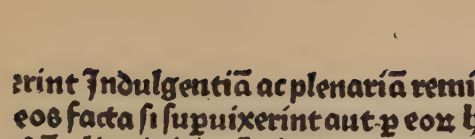
The only book, except the forty-two-line Bible, which can be connected with Gutenberg is the CATHOLICON, an encyclopaedic dictionary compiled in the thirteenth century by Joannes Balbus,

Altissimi presidio cuius nutu infantium lingue fi
unt diserte. Qui & nõ nosepe paulis revelat quod
sapientibus celat. Hic liber egregius. catholicon.
dñice incarnacionis annis M CCC lx Alma in ur
be maguntina nacionis inclite germanice. Quam
dei clemencia tam alto ingenij lumine. dono & ꝑ
cuius. ceteris terrau nacionibus preferre. illustrare
& dignatus est. Non calami. stili. aut penne. suffra
gio. sed mira patronau formau & concordia. ꝓpor
cione et modulo. impressus atq; confectus est.
Hinc tibi sancte pater nato cũ flamine sacro. laus
et honor dño trino tribuatur et uno Ecclesie lau
de libro hoc catholice plaude. Qui laudare piam
semper non linque manam DEO. GRACIAS

COLOPHON OF THE CATHOLICON. 1460

of 373 leaves as large as the Bible. At the end is the colophon or maker's statement upon completing the work, declaring that it was produced at Mainz in 1460 "by the help of the Most High . . . who oft-times reveals to the lowly that which he hides from the wise." The convincing reason for believing that Gutenberg printed this work, and that no one else can have done it, is that these words might well have been written by an inventor who, despite his invention, remained profoundly unsuccessful, and that it is hard to see their appropriateness to anyone else.

The type with which the Catholicon was printed was much smaller than that used for the forty-two-line Bible, twenty lines of the latter measuring 140



FROM THE INDULGENCE DATED 1454

millimeters and twenty of the Catholicon type, 82 mm. Types of just about the same size, however (20 lines, 90 mm.), had been used some years earlier for printing broadside Indulgences which were issued in 1454 and 1455 to those who gave money to help the war against the Turks.

¶ Another fact connected with the Bible shows that the effort to reduce the cost of printing goes back to its very beginning. Some copies of the Bible have only 40 lines on the first ten pages, followed by a page with 41 lines. Careful examination proves that the saving made by getting 42 lines into the space planned for 40 was accomplished by filing off the upper and lower sides of the body or base of the metal type, so that there was less white between each two lines. As soon as the saving in the cost of the paper, amounting to nearly five per cent, or 30 leaves for each copy, was shown to be practicable,

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the moulds were readjusted for the smaller body, and the type for the remainder of the book was cast on this size.

The reasonable inference from the facts in the preceding paragraphs seems to be that, as soon as work on the Bible began, Gutenberg introduced at least two changes which lessened the cost. He would presumably have continued to make other alterations in the appearance of the book, as new ideas came to him, if someone had not interfered to prevent this. As the Bible was completed without further change, it is not unlikely that Fust, who provided the money and was interested in getting a salable product as soon as possible, did interfere by placing in charge someone whom he could trust to carry the undertaking through. If he did this, it is also likely that the inventor — prevented from trying experiments which would interrupt the progress of work on the Bible — spent his time devising means for making even smaller type and still cheaper books. Such a type was used for the Indulgences of 1454, and in a perfected form for the Catholicon of 1460.

Schoeffer became the son-in-law of Fust, and after the latter's death in 1466 carried on the business until 1502.

THE PERIOD OF DEVELOPMENT

1460–1480

The second book, and the first from the firm of Fust & Schoeffer, was a magnificent Psalter of 175 leaves, the size of the Bible, and dated 1457. The extraordinary mechanical skill of the craftsmen who developed the art of printing, within the decade following the application of the invention to a large undertaking, is shown by the intricate woodcut initial capitals with which they decorated this Psalter. These were evidently designed to prove that the new method of book-making could supplant the work of the illuminators as well as that of the scribes, for they were printed or stamped in red and blue, the two colors registering so accurately that typographic experts have been unable to agree just how the work was done. These capitals were used again in a second edition of the Psalter, two years later; but the obvious difficulties must have made the work expensive, and there were no further experiments of the same sort after this year.

Fust and Schoeffer signed and dated their work in the colophon at the end, stating that the Psalter was produced "by an ingenious invention of printing or stamping without any driving of the pen, and to the worship of God has been diligently brought to completion by Johann Fust, a citizen of Mainz,

and Peter Schoeffer of Gernsheim, in the year of the Lord 1457, on the vigil of the Feast of the Assumption" (August 14). Similar statements appeared at the end of nearly all the books they put out, praising in varying phrases the newly perfected method by which the books were made. The statements in these colophons are convincing evidence that this first printing firm had no intention of trying to sell its productions to unsuspecting buyers as manuscript books.

The Bible was printed again by Fust and Schoeffer, in 1462, in a smaller type than that of the forty-two-line edition (20 lines measuring 118 mm.), the text occupying 481 leaves. Below the colophon of this Bible they added a cut of their coats of arms. This was the first use of a printer's mark, or device.

Pñs hoc opuſculuz fimtū ac cōpletū·et ad
euſebiaz dei mduſtrie in ciuitate Maguntī
per Johannē fuſt ciuē·et Petrū ſchoiffher de
gernſhxym clericū diotef ciuſdez eſt conſū-
matū. Anno incarnacōis dñice·M·cccc·lxij·
In vigilia aſſumpcōis gl'oſe virginis marie.

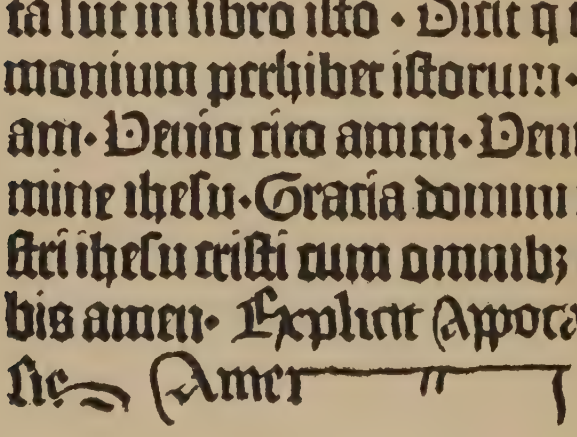
The idea is an obvious extension of the use of a sign to mark a shop, and it is not unlikely that these joined armorial shields hung over the door of the printing house. Nothing analogous to this use of a device, however, had been characteristic of the manuscript books; so that this firm may be credited with introducing a practice which has ever since persisted among printers and publishers, of using a distinctive mark as part of their imprint.

Johann Mentelin of Strassburg, and his son-in-law, Adolf Rusch, were the first rivals of Fust and Schoeffer. Gutenberg had lived at Strassburg from about 1430 until shortly before 1448. There is a technical crudeness about much of the work of Mentelin and Rusch which suggests that they may have acquired their knowledge of how to print before the details of the invention had been perfected. Only four of the 58 books ascribed to these two, on the evidence of the type faces, are dated, and only a few others have the name of either place or printer. These signs of secretiveness suggest some connection with the time when the inventor would naturally desire to keep everything as much as possible to himself.

A few fragments survive which may be specimens of Gutenberg's early experimental work. The most convincing of these is a portion of an astrological calendar, which gives certain data that correspond with the astronomical calculations for the

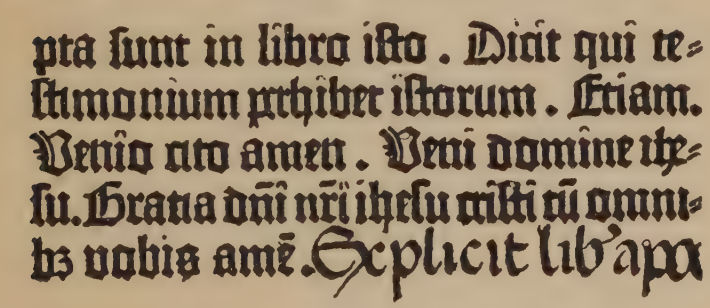
year 1448. This is the year in which the inventor is thought to have returned to Mainz, having perfected the details sufficiently to enable him to interest a financier in the possibilities of what he was doing. Other fragments in differing types of the same general character contain portions of the text of Aelius Donatus "On the Parts of Speech," which was at that time the most widely used elementary school-book — just the sort of book for which there would be a ready sale to uncritical buyers interested only in cheapness.

Another early type, closely related to that of the Calendar fragment, was used in printing the THIRTY-SIX-LINE BIBLE. The difference between 36 and 42 represents the extent to which the type was reduced and refined, in the effort to lessen the size, and the cost, of the work, when the First Bible was undertaken. The thirty-six-line Bible, although it is in an earlier type, was printed after the other


ta lūt in libro isto · Dicit q̄ testi
monium perhibet istorum · Eti
am · Veuio cito amen · Ueni do
mine ihesu · Gracia dominī no
stri ihesu cristi cum omnib; vo-
bis amen · Explicit Apocalip
sis Amen

Bible, and not completed until about 1460. It is a very puzzling book, and almost nothing that is certain has been found out in regard to it. It appears to have been the work of someone whose resources were limited, and who was trying to take advantage of the labors of those who had the help of Fust's money. Its chief significance lies in the fact that its existence proves that by the time the First Bible was finished, the knowledge of how to print had passed out of the control of those who used this knowledge with the inventor's consent. Printing had become public property. Schoeffer developed the only effective monopoly, that of superior workmanship.

The thirty-six-line Bible may have been printed at Bamberg, for Albrecht Pfister used this type there in 1461 and 1462 for the first books printed in the German language and the first that have survived which were illustrated with pictures.


pta ſunt in libro iſto . Dicit qui te-
ſtimonium prhibet iſtorum . Etiam.
Veniꝰ cito amen . Veni domine ihe-
ſu. Gracia dñi nri ihesu criſti cū omni-
bꝫ vobis amē. Explicit libꝫ apc

The End of the Forty-two-line Bible

Showing the same text as that from the Thirty-six-line Bible on the opposite page. In both, the explicit was added in manuscript, and is not part of the printed work.

Cologne was the next place to utilize the invention. Its University provided purchasers eager to secure cheaper books. The demand was for small works containing the required reading on which the professors lectured. These texts were reprinted over and over again in almost identical form and type, making the study of the editions particularly difficult. There are books from at least nine fifteenth-century Cologne presses, nearly a third of the total number, which can be distinguished by their use of very slightly differing types, but are without other means of identification. The most plausible explanation is that the printing business developed into something of a cottage industry, anyone who could buy or borrow a little type and rig a press being able to make a living by catering to the student demand. The fact that most of the Cologne books were of quarto size, averaging about $5\frac{1}{2}$ by $7\frac{3}{4}$ inches, and frequently of not over 16 or 24 pages, shows that the printers needed only a little capital to carry on a business. The size of these books should be kept in mind in comparing the large number of recorded titles of Cologne fifteenth-century books — over 1400 — with the Mainz record of 200 or Strassburg's 1000. The latter cities specialized on bulky legal and ecclesiastical folios containing the canon law and the mediaeval classics, so that the actual amount of work done was greater than at Cologne, despite the latter's larger figure.

THE SPREAD OF PRINTING THROUGHOUT GERMANY

There were three establishments capable of turning out a large book, and in all probability also an uncertain number of smaller shops engaged in printing, before 1462, when the city of Mainz was thrown into turmoil by the struggles of rival claimants to the archiepiscopal power. Fust and Schoeffer saw in this an opportunity to develop a new line of profitable activity. Two of the principal resources of the industry began at this time, the printing of news and of official business. In 1461 and 1462 both of these took the form of large broadsides, the printed matter occupying one side of a full sheet of the ordinary paper of the time, approximately 12 by 16 inches. Ten of these broadsides are now known, but undoubtedly others were printed which have entirely disappeared. They contained proclamations, announcements, and information published by direction of the successful archbishop, Adolph of Nassau, or on behalf of the deposed rival.

The troubles which culminated in the sacking of Mainz by the victorious soldiery in 1462 added to the prosperity of the local printers, as in all later wars. It is, however, also probable that during the confusion some of Gutenberg's workmen left him, to try their fortunes elsewhere. The general spread of printing to other towns is ordinarily dated from

this year. Eltville was the next place at which a press was set up, and Basle followed by 1467. At least five German printers had found their way to Italy before another northern city welcomed the new art. The way the craftsmen made their way through the German-speaking states can be traced by the earliest dates which have been found in extant volumes. Augsburg had a book in 1468; Nuremberg and Beromünster in 1470; Speier in 1471; Esslingen in 1472; Ulm, Lauingen, Buda Pesth, and Merseburg in 1473; Marienthal, Cracow, and Lübeck in 1474; Breslau, Blaubeuren, Burgdorf and Trent in 1475; Rostock and Pilsen in 1476; Reichenstein in 1477; Prague, Urach, Reutlingen, Geneva, and Schussenried in 1478; Würzburg and Erfurt in 1479; Magdeburg, Zurich, and Memmingen in 1480. There was printing in 27 or 28 other places before the end of the century.

The itinerant craftsmen to whom the spread of this knowledge was mainly due divide into two groups — those who established a permanent business in a large community, and those who produced only one or two books in a small place, ordinarily for a local ecclesiastic, and then moved elsewhere. All that a wandering printer needed to carry with him was the hand mould in which he could cast the type. He did not take the type itself, nor the matrices from which the face of the type was cast, because for the first twenty-five years of typography

the printers used different type-faces each time a new press was organized. The reason for this was that each district, and often each locality, had its individual scribal peculiarities, and when printing was winning a place for itself, the fundamental aim was to produce books which would be indistinguishable in general appearance from other books with which the customers were familiar. There was nothing improper in this, nor any desire to pretend that the new things were anything other than a cheaper mechanical substitute which was just as good as the more costly hand-written book.

The wanderer followed his chosen road until he came to a monastery or other house whose head desired to have a book made by the new method. There the printer settled himself to fashion his matrices as closely as practicable like the letters in the copy of the book given him to reproduce. While he was doing this, the lead metal for the casting would be procured, and a sufficient quantity of paper ordered. Most localities could probably supply a large wooden screw, and if not, one could be made, and with this in hand, the simple press was not difficult to put together. The compounding of a suitable ink was one of the important secrets of the trade, but the ingredients should have been ordinarily procurable. All this must have taken considerable time — two years is one estimate of the time that had to be allowed to get a new printing shop to the point of

producing a book. Even in those leisurely days the initial enthusiasm for the novel undertaking must often have waned as the months dragged on and the preliminary expenditures multiplied. Of these last, the largest outlay was for paper, which is figured to have amounted to about half the total cost of a fifteenth-century book. Nearly all of these itinerant printers who are known because they produced a single book in a small place, are never heard of again; and it is a fair assumption that, after their one venture in independence, they returned to the ranks of the employed in some established shop.

At Augsburg the guild of wood-engravers had a dominating control of local affairs, and they feared that the new invention would interfere with their prosperity. It was only through the intervention of the local prelate that Gunther Zainer was allowed to set up a press in that city. The agreement provided that the printer should employ the engravers to illustrate his books. The result of this was that Augsburg long continued to be a centre for the publishing of popular vernacular literature and for illustrated editions of Latin works. The pictures in the Augsburg Bibles are among the notable examples of German designing and wood-engraving of the later fifteenth century. The book-buyers and readers of that time appreciated these books as much as their successors do at the present day, with the result that they are now as scarce as they are entertaining.

THE ESTABLISHING OF PRINTING AS A BUSINESS

The year 1480 marked the change from the period when each printer did everything for himself, to that in which specialization began and the initial steps were taken toward differentiation into organized industries. Adolph Rusch of Strassburg was a leader in this tendency, probably realizing that he was a very poor printer but a good business man. He developed a trade in supplying paper for other printers, and entered into a contract for printing a portion of a Bible which Koberger of Nuremberg had undertaken. Some of the Rhine Valley craftsmen had apparently begun to specialize as typefounders. This led to greater uniformity in the characters, a long step toward monotony and standardization. The same tendency is seen in the discovery, made about this time, that labor could be saved, whenever a commentary was placed alongside or all around the text, by using a type for notes which was exactly half the size of the text type.

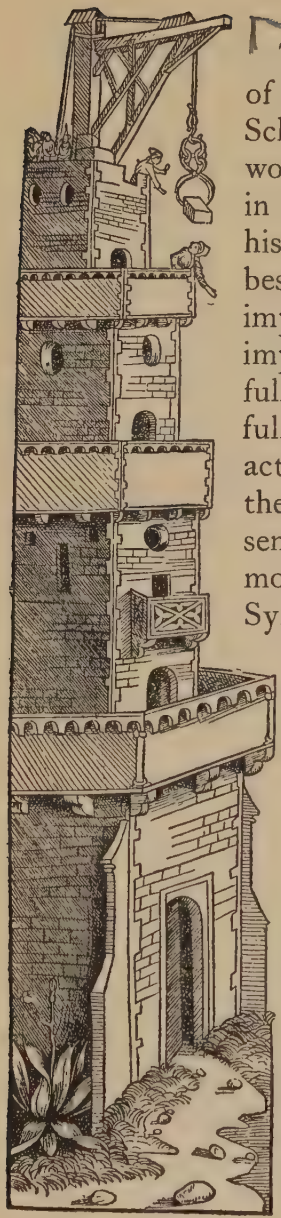
Anton Koberger of Nuremberg became the first wholesale printer or publisher on a large scale. During the preceding quarter-century, the printer was ordinarily also a retailer, having a bookstore in the front of his house or shop. There he sold the works he printed, as well as others which he secured

by exchanging his productions for those from the presses of rival printers living in the same or nearby towns. The exchange was usually made on the simple basis of relative numbers of sheets, one book of 48 leaves (12 sheets of 4 leaves each) being reckoned the equivalent of three copies of a book of 16 leaves. The distance between the places where such exchanges were made rapidly increased, correspondingly enlarging the variety of each bookseller's stock. This was facilitated by the steady improvement in means of transportation — the smoothing of main highways, the widening of bridle paths into roads, and the making of lighter carts with smaller wheels, being among the more significant changes in northern Europe which went on throughout the fifteenth century.

Koberger led the movement from exchanges to sales over a wide area. Starting in 1472, by 1480 he was doing more business than his own establishment could handle. He employed Rusch to print, or to get printed, a portion of a monumental Bible with elaborate Commentary by Nicolas de Lyra, the whole work making either five or seven volumes, this depending upon how it was divided for binding. Rusch in turn had to hire additional type from Basle. The Basle printer, JOHANN OF AMERBACH, was just starting on a long and prosperous career, but already his resources justified him in thinking of issuing a rival edition of this de Lyra Bible.

Rusch heard of this plan and wrote to Amerbach a letter explaining Koberger's difficulties in carrying the financial load, and revealing the fact that Rusch had himself printed and sold additional copies of his portion of the work in order to raise the ready money to pay his workmen.

The NUREMBERG CHRONICLE was Koberger's most successful venture. It is one of the widely known books of all time. No single edition of any other work — this has not been reprinted since it appeared at Nuremberg in 1493, in two issues, with the text in Latin or in German — has been so uninterruptedly in demand. The number of copies that were printed must have been very large, probably more than a thousand, the usual maximum of that period. Over 200 copies are owned in America 400 years later, and copies can usually be found in the stock of the principal second-hand booksellers. Koberger had several private partners in this enterprise, and when an effort was made in 1509 to close the account, there were outstanding copies on sale at Paris, Strassburg, Prague, Gratz, Ofen, Milan, and Como; as well as unsettled accounts with correspondents in Vienna, Passau, Basle, Lubeck, Ingoldstadt, Dantzig, and Franckfurt am Main. Returns had been received from Breslau, Posen, Bamberg, Cracow, Lyons, Bologna, Venice, Florence, and Genoa. More than 500 copies had gone to Italy.



The Nuremberg Chronicle is a history of the world compiled by Dr. Hartmann Schedel. It was elaborately illustrated with woodcuts executed by two of the partners in the venture, Michael Wohlgemuth and his step-son, Wilhelm Pleydendorff. The best count of these illustrations gives 1809 impressions from 645 different blocks. The important cities were represented by carefully drawn pictures occupying one or two full pages, and each showing all the characteristic local aspects. For lesser places there were 22 cuts which served to represent 69 different towns. Three cuts of a monastery did for 23; 2 views of a Papal Synod in session, for 22; 44 portraits of a King, and 28 of a Pope, for 270 and 326 individuals respectively.

The record of fifteenth-century printing in Germany is explained by the economic transformation of the Rhine Valley. Increasing numbers of people in the towns worked longer hours at their industries, and bought their food instead of raising it. The amount of money in circulation became larger, and almost everybody had more of it than previously. People took more holidays and they bought

THE TOWER OF BABEL
From the Nuremberg Chronicle. Reduced

things they had not formerly enjoyed; and more children were sent to school. More books were sold — both cause and effect of an ever greater amount of talk about all sorts of things, but chiefly about eternity and about those who made a profession of preparing people for it. In the later Middle Ages the business of book-making—copying by hand—was thoroughly established as a secular occupation as well as in the monastic houses, but the scribes could not meet this increasing demand, largely because the higher earnings of industrial laborers reduced their numbers. Some way of making books more quickly, and more cheaply, had to be found, and consequently typography was invented. There was no let-up in the spreading prosperity, and the printers met the demands upon them by developing their business into specialties — wholesale manufacture and supplies, book-selling and publishing. The intellectual activity of which these were the signs in the German-speaking countries flowered and went to seed in the Protestant Reformation.

THE PRINTERS ENCOUNTER THE RENAISSANCE

The first road taken by the printers beyond the Rhine Valley led over the Alps to Italy. There the Revival of Learning had become a social as well as an intellectual factor in the life of the upper classes. The fact that this intellectual movement did not penetrate low enough to create a numerous book-buying public, could hardly have been foreseen by the men who came from the busy Rhine cities. The consequence was that many of them worked themselves straight into bankruptcy by printing numerous editions of the literary classics. A season of bad weather and poor harvests brought hard times and a reorganization of the printing business. Those who survived were successful because they changed the character of the books they put out, to meet the real interests of the people who could afford to patronize them. Treatises on the art of war, on mathematics and astrology, took the place of the ancient classics.

Conrad Sweynheym and Arnold Pannartz set up the first press in Italy, at the Benedictine monastery of Subiaco. One book was completed before the end of September, 1465, besides a "Donatus pro puerulis," of which no copy is known, and which was doubtless issued as a sample of what they could

do. Two others were finished by the early summer of 1467. The three large works are representative of the kinds of books for which the first-comers expected to find a ready market in Italy. The first was an ancient classic, Cicero de Oratore; the second contained the writings of "the Christian Cicero," Lactantius, recommended for the purity of his literary style; the third was the work of a Church Father, St. Augustine's De Civitate Dei.

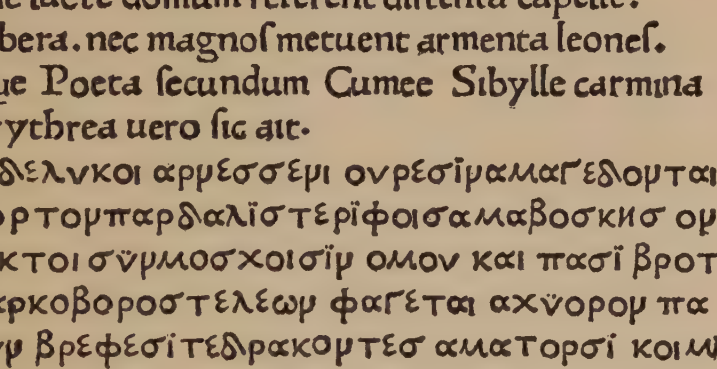
The type in which these Subiaco books were printed combines the more admired qualities of both the heavy angular Gothic letters of the north, and the smoothly rounded script which was in vogue in humanistic circles. Many lovers of fine printing regard it as the finest of all the early types.

brādas mter nos q; recolendas : Nam pma ętate incidimus
in ipam pturbationē diſciplinę ueteris : & cōſulatu deuenimus ī mediū rey omniū certamē atq; diſcrimen : & hoc tp
omne poſt cōſulatū obiecimus his fluctibus : qui p nos a cōmuni peſte depulſi in nos meipos redundarēt : Sed tamen
ī eis uel aſperitatibus rey uel anguſtiis temporis obſequar
ſtudiis noſtris : & q̄tum mihi uel fraus īimicorum uel cauſa
amicoy : uel res. p. tribuet otii ad ſcribendū potiſſimū con.
ferā : Tibi uero frater neq; hortanti deero neq; rogāti : nā
neq; auctoritate quiſq; apud me plus ualere te poteſt : neq

It was followed closely by Emery Walker and Sidney C. Cockerell in designing the type now used by St. John Hornby for his Ashendene Press books, the finest product of a modern private press.

At Subiaco, Sweynheym and Pannartz were under the patronage of the Abbot, Cardinal Turrecremata or Torquemada. He was a popular author as well as a powerful ecclesiastic, his "Exposition of the Psalms" as well as his "Meditations on the Life of Christ" both appearing in many editions before the end of the century. It may be that the Cardinal shifted his favor, for the Meditations was the first book printed by another German who established himself at Rome in 1467. He was named Ulrich Han, latinized Udalricus Gallus, and is described in one of his own colophons as "the long-bearded rooster." In this year Sweynheym and Pannartz also moved to Rome, where they were quartered in the house of the brothers de Maximis. The library of this house, containing a complete series of the books of these two printers (except the Donatus), remained intact until late in the nineteenth century.

Both of the first Roman printing shops took as the model for their type the delicately rounded letter favored by the early renaissance scholars. This was the beginning of the regular use of the type still known as "roman," commonly used for all ordinary printing. The Italian scribes used a lighter, thinner ink than the northerners, and in this also


Murice iam croceo mutabit uellera fuco.
Sponte sua sandix pascentes uestiet agnos.
Ipse lacte domum referent distenta capelle.
Vbera. nec magnos metuent armenta leones.
Que Poeta secundum Cumee Sibylle carmina
Erythrea uero sic ait.
οι δελνκοι αρμεσσεμι ονρεσϊμαλγεδομται
χορτομπαρδαλϊστερϊφοισαμαβοσκησ ομ
αρκτοι σνμοσχοισϊμ ομον και πασϊ βροτ
σαρκοβοροστελεωμ φαγεται αχνορομ πα
σνμ βρεφεσϊτεδρακομτεσ αματορσϊ κοιμω

From the edition of the Works of Lactantius printed by Sweynheym and Pannartz at Rome in 1470

The Greek type will be referred to on page 61.

they were followed by the printers. The result was that the pages have a much more refined, or less virile, effect when contrasted with the solid black mass of a page in the books made in Germany at the same time.

VENICE BECOMES THE HEADQUARTERS OF THE BOOK TRADE

In 1469 John of Speier introduced the new art to Venice. The city senate encouraged him with a grant of a monopoly of all printing for five years. He began modestly with an edition of a hundred copies of Cicero's Epistolae ad familiares, of 125 leaves; the result was that he had to follow this immediately with a second edition. Next came Pliny's Historia naturalis, which filled 355 large leaves, and De Civitate Dei, on 274 leaves. While the latter work was in press, a visitation of the plague numbered the printer among its victims. His brother Wendelin finished the book in 1470 and claimed the right of succession to the monopoly; but the officials perceived the possibilities of the industry and refused to limit it again. The result was that Venice soon became the most active of all printing centres.

Nicolaus Jenson began printing at Venice when John of Speier's monopoly was cancelled. He was a Frenchman, the first recorded printer who was not a German, and there is a legend that the French king had sent him to Mainz to learn about the new invention. At Venice he started work by designing a type in the roman character, which appears in what has been considered to be his first book, the

ED PHOENICVM theologiam iam per auctores ſuos expoſuimus quam omīno ut peſtiferam fugi endam & ſanitatē tantæ inſaniæ quærendā ſalutare prædicat euangeliu: quod autem non fabulæ dictæ ſunt aut poetarum figmenta altius quiddam quaſi nucleum contegentia: ſed ſapientum priſcorum &

De evangelica praeparatione of Eusebius. This type was at once recognized by his contemporaries as having the most admirable qualities in its design, and this opinion has held to the present day. Many judges of fine printing regard it as the most perfect type that has been produced for use in books intended for reading by the general public. It was closely copied by Emery Walker and T. J. Cobden Sanderson in the type designed for the latter's Doves Press, which put out books of the highest typographical excellence from 1900 to 1916.

The test which a well-designed type face must meet first of all is the way in which each separate letter fits every other letter, on either side. The scribes accomplished this adjustment to the adjoining letters by minute changes in the form of the letter, going so far as to use regularly distinct forms, such as *ſ* or *s*, and many others less commonly, for certain combinations or for the middle or end of a word. The earliest printers copied many of these alternate forms, in their effort to produce something

just as good as the manuscript books. As soon as printing demonstrated its superiority as a means of production, simplification made rapid progress, although it was not until the nineteenth century that the last of these variant forms disappeared from all but antiquarian fonts, leaving the word-symbol & as the sole survivor of the oldest times.

Jenson's remarkable achievement was to meet all the tests of a readable type face better than anyone else. His type has only one fundamental fault, which may be inherent in its excellence. It is a generously rounded open-faced design, and this gives each letter greater width than usual. The result is that there are fewer words on a line and page, and consequently more paper was required for a book in this type than for one with a more condensed face. This made his books cost more than rival editions. Within two years Jenson recast his letters. This lessened the outstanding preëminence of the type, but helped him to maintain a leading position in the trade. The business of which he was the head was consolidated shortly before his death in 1480 with the other principal Venetian firm, that of Johann de Colonia and Johann Manthen. Jenson's name continued to appear in the colophons of the books issued by the joint publishers after his death, perhaps because of the commercial value of his personal reputation, or for the simpler reason that his estate retained an active interest in the business

Venice by 1480 was becoming the largest book-making centre. The leading men in the business were distributers, who hired the printers to produce books for which there was a world-wide market, rather than caterers to a local or national demand. Joint undertakings were the rule rather than the exception, two or more wholesalers uniting to commission an edition of a book for which they expected a good sale. Octavianus Scotus, who may have succeeded to some of the business of the Jenson-Johann de Colonia firm, issued 66 books in his own name during the last two decades of the century. His name also occurs in colophons linked with those of Matteo Capcasa, Johannes and Gregorius de Gregoriis, Antonius de Gusago, Johannes Hamman, Johannes Leoviler, Bonetus Locatellus, Andreas de Paltasichis, Christophorus de Pensis, Albertinus Rubeus, Johannes de Cereto de Trinino de Monteferrato alias Tacuinus, and Bartholomaeus de Zanis. Bonetus Locatellus was the printer whose name occurs more frequently than that of any other in Venetian books of the last fifteen fifteenth-century years, the number listed under his name in Konrad Burger's index at the end of Copinger's Supplement to Hain (London, 1902) being 144. His name also usually appears in books printed for Scotus, but none of the others named above as partners with Scotus are mentioned in connection with Locatellus, perhaps because some

of them may have been printers themselves. He did work for others, however—Nicolas de Frankfordia, Johannes Paep, "librarii" at Buda, Lazarus de Soardis, Andreas Torresanus, Perrinus Lathomi, Bonifacius Johannis and Johannes de Villa Veteri, and Jehan de Vingle.

Venice enjoyed two advantages which account in part for its preëminence as a headquarters for the book trades. Paper-making had been the principal industry in several of the northern Italian towns, located on the streams which issue from the mountains, since the thirteenth century. This gave a steady supply of the printers' most necessary raw material at a low cost. Venice was the world's commercial metropolis throughout the period of the Renaissance, and this assured cheap transportation to the nearest port of every market where there was a call for books. Unbound, in sheets, the books were packed solidly in casks, and as the shipper could wait for favorable conditions, his rates were the lowest. A third factor had much to do with the virtual monopoly enjoyed by the Venetian publishers of all the standard lines of books. Italy was the home of humanism, the seat of the world's most active intellectualism, and as a consequence books made in Italy were preferred by the buyers in every less favored country, entirely regardless of their intrinsic merit.

Commercial success in the publishing or in the

printing business does not necessarily imply typographic distinction in the output, and only one of Jenson's immediate followers made a name for himself as a fine printer. This was ERHARD RATDOLT, who was the principal member of a firm that issued a group of books with woodcut borders and decorative initial letters which set a new style at the time and have been admired ever since. The other partners were Peter Löslein, who seems to have been the proof-reader and who doubtless had charge of the editorial side of the business, and Bernard Maler. The latter, whose name appears as Pictor in the Latin colophons, may have been Bernard a painter, from Augsburg, and therefore the designer of the decorations for which the credit has been given to the practical craftsman of the firm, Ratdolt.

Ratdolt may have been employed at Nuremberg by JOHANN MÜLLER of Konigsberg, otherwise Regiomontanus or Monteregio, who was the most distinguished astronomer of the time. Müller had provided himself with a private press in order to assure the accurate printing of his calendars and astronomical calculations, and perhaps to protect himself against theft of his figures by workmen not under his control. In 1475 Pope Sixtus IV summoned him to Rome to advise about the reform of the calendar, which was already noticeably out of harmony with the celestial bodies. The following year Ratdolt and

his two partners issued their first books at Venice, Müller's Kalendarium in an Italian as well as a Latin edition. This work has a claim to fame because it appeared with a title-page in the modern style, with the names of the printers and the date at the foot, the whole enclosed in a border made up of decorative woodcuts. Most of their books, however, appeared with a border specially designed to surround the text of the first page, the title being in a paragraph preceding the text, which was the ordinary style of the time. One of their characteristic borders is reproduced on the opposite page, from a tract by Celsus Maffeus printed in 1478. The border was intended by the designer, of course, to be used with a heavy-faced type, like that of the single line giving the title of the tract which appears at the top of the page.

Ratdolt continued to work at Venice for ten years, his 66 recorded books including works on geography, history, and standard religious treatises, but being mainly astronomical or on allied subjects. Then he returned to his native Augsburg, where he made a fresh reputation as the authorized printer of the service books required for that diocese.

Pro facillima Turcorum expugnatione epiſtola.

PRINTING REACHES THE WHOLE EUROPEAN WORLD

SOME of the printers who set out from Mainz made their way up the Rhine to Basle, which soon became an important centre for the distribution of books for northern France. The reputation of its University gave prestige to its imprints, and the cosmopolitan character of the population led to the publication of works which found a ready sale along the diverging trade routes. The most travelled way led across to the Rhone and to Lyons. This was a great trading centre, where the itinerant peddlers of every sort of ware congregated to stock their packs before setting forth to seek a market in central or

southern France. Among the shops at Lyons were many kept by the purveyors of reading matter, whose shelves were filled with small booklets such as had been made long before the days of printing, to be sold and not to be preserved. These shopkeepers welcomed the printers and set them to work producing books of a popular character. The solid literature in Latin continued to be imported from Basle or from Venice until the end of the century, when the slow northward extension of the Renaissance influence led the Lyonnese printers to engage learned editors and to enter into competition in this field.

But their principal output continued to be books in the vernacular — romances, household manuals of health or husbandry, the "Romant de la Rose," "La Légende dorée," "Le Miroir de vie humaine," and "La Somme rurale," a handbook for the guidance of the local magistrates in the performance of unaccustomed judicial functions. Many of these were adorned with pictures, designed to widen the possible market. Such books as these, intended to interest all sorts of buyers throughout the country districts, prove the success with which this purpose was attained by being still among the most sought after, and likewise among the hardest to find, of all early publications.

Some of the printers followed the traders to the provincial French centres, but they found patrons scarcer than in the corresponding Teutonic dis-

tricts. A few kept on over the Pyrenees, to arouse the interest of a small but affluent group of widely scattered Spanish book-buyers. In the Hispanic Peninsula the contact of racial and cultural strains produced conditions unlike those anywhere else. The late mediaeval scribes developed a distinctive handwriting, heavier and more substantial than that of other countries. The printers copied this, with the result that their books are splendidly impressive, unmatched for effective grandeur and dignity.

The Hebrew communities possessed a large share of the intelligence as well as of the money in Spain and Portugal, and these gave to the new art its warmest welcome. Jewish craftsmen quickly mastered its details, and the numerous editions of the sacred writings and other Hebrew works which they produced rank high among early typographic masterpieces.

The spreading stream of printers trickled across the Atlantic, close on the heels of the Spanish conquistadores. Johann Cromberger of Seville, the leading sixteenth-century Spanish printer, sent overseas an outfit in charge of a trusted workman, Juan Pablos, to establish the first American press at the City of Mexico in 1539. As long as the stock of imported paper held out, and at annual periods when it was replenished, Pablos was kept busy with notices, proclamations, and laws for the great Viceroy Mendoza, missionary tractates edited by the

Archbishop Zumárraga, and various helps for those who were trying to master the native languages. A piece of news, the account of the earthquake which destroyed Guatemala City in 1540, was the second product of this press which has survived. Half a century later, in 1584, Antonio Ricardo made his way to Lima in Peru. There he printed the papal proclamation decreeing the reform of the Roman calendar, and the results of an important diocesan convention, while the Viceroy was carrying on an anxious correspondence with the Crown authorities in Spain, who were trying to decide upon reasons why the printer should not be permitted to work in the distant colony.

Paris had the first French press, in 1470, but this differed from all of those already mentioned in that it was a private establishment and not an ordinary commercial venture. The rector and the librarian of the Sorbonne, with help from a wealthy ecclesiastical patron, hired three workmen from Basle to print texts for their students, for which the latter presumably paid, as well as other books which they wished to distribute to their friends. The librarian, Guillaume Fichet, wrote personal letters to accompany the presentation copies, and had them printed to go with the books. In one of these, dated New Year's Day, 1471, he mentioned the fact that the new art had been discovered by Gutenberg; this was the first time that the name of the inventor is known to have appeared in type.

The Orations of Cardinal Bessario is the most interesting book that came from the Sorbonne press. It was an appeal for peace among the Christian nations, in order that they might unite in opposing the Mussulman power. A copy of this book, richly illuminated and accompanied by a printed personal letter urging the cause for which it was issued, was sent to each European ruler and to many influential dignitaries. It took about a year to prepare these and dispatch them on their mission. Fichet's copies

of his letters, and his correspondence with the Cardinal, were bound with a copy of the Orations, which is now in the Bibliothèque Nationale.

The Sorbonne press was very active for nearly three years, producing 22 books in addition to the special work on the personal epistles and the like. Then Fichet and the rector, Heynlin, were obliged to leave Paris. The printers were unable to find another patron, and so moved out of the University precincts into a nearby shop. There they carried on a regular business, in competition with two rival establishments conducted by French workmen, catering to the needs of the students.

The members of the royal house of the Valois had been for generations collectors of beautiful books and patrons of scribes and illuminators. The court of Burgundy rivalled its cousins of Paris in this, as in other respects. It was, therefore, a curious coincidence that the first press at Bruges was set up for the personal use of its owner, one of the court circle. He was a retired English wool merchant, William Caxton, who was attached as financial adviser to the Duchess Margaret, sister of the English King Edward IV. He had a taste for writing, and occupied his leisure in translating French romances and the popular narratives of the time into his native tongue. These translations pleased the duchess, with the result that many in her train besought copies for themselves.

Caxton visited Cologne in 1471, and tarried there to complete a version of "Le Recueil des histoires de Troye." The new way of multiplying books interested him, and he familiarized himself with its methods. When he returned to Bruges he provided the necessary equipment so that he might gratify his friends at court with copies of the book. This translation of the Troye book, the first book printed in English (but not printed in England), was completed probably in 1475. It was followed by "The Game and Pleye of the Chesse," a treatise in which there is more of sermonizing than of gaming, and an even more serious account of "Les Quatre Derrenières Choses." In the summer of 1476, Charles the Bold entered upon the campaign which was to end with his death at Nancy. The outcome must have been foreseen, and before the following Michaelmas Caxton returned to England, where he hired a shop, with the sign of a red pale, in the Sanctuary at Westminster. At Bruges, his type was used after he left by Colard Mansion, who may have been the workman employed by Caxton there.

The first book printed in England that is dated, came from the shop at Westminster on November 18, 1477. This is "The Dictes or Sayengis of the Philosophres." It was not translated by Caxton himself, but by his friend, the Queen's brother, Earl Rivers, who is gaily chaffed by Caxton in an editorial epilogue. One of Caxton's own works, the

History of Jason, may have been finished before the Dictes; it is not dated, and the impression of the type is so sharp that it must have been fresh from the moulds. These two works were soon followed by Chaucer's Canterbury Tales.

ENGLAND was the only country in which printing started with books in the native language. Its first press was employed throughout its career in producing works in its own literature. The glory of this fact is not diminished by the explanation that the continental book-traders, whose agents visited London regularly, could undersell any attempt to produce Latin works; or that English scholars preferred editions having the prestige of a continental imprint.

Caxton printed more than a hundred works of which some vestige still remains. A high percentage of these is now known from only a single copy, and as many more are represented by fragments, sometimes consisting of no more than a few lines rescued from the lining or the pasteboard of a binding. This is sufficient proof that there must have been many other editions which have entirely disappeared. The fact that a majority of his books were small pamphlets containing popular tales in verse or prose explains why so many of them were completely worn out by readers.

The CANTERBURY TALES were printed twice, from different manuscripts. Other works that came from the Westminster press, which still have a place

on the shelves of readers of English literature, are Gower, "Confessio Amantis," some of the poems of Lydgate, Malory's "Morte d'Arthur," Higden's "Polychronicon," the Chronicles of England, and "The Golden Legend." Caxton also printed his own translations of Æsop, "Reynard the Fox," and several French romances.

The small books containing tales which were certain of a ready sale, or equally merchantable religious works, the Hours of the Blessed Virgin, the Latin Psalter, and sundry moral treatises, probably served to keep the workmen busy when they were not occupied with the larger works from the owner's pen. He was first of all a business man, and doubtless saw to it that his venture, even though it was intended primarily for his own purposes, did not cost him more than need be. His foreman was probably a Fleming, Wynkyn de Worde, for the latter became the owner of the printing plant after Caxton's death, about 1491, and carried it on for forty-three years. Wynkyn prospered, continuing to put out a steady succession of editions of the small popular pamphlets which were started in Caxton's time.

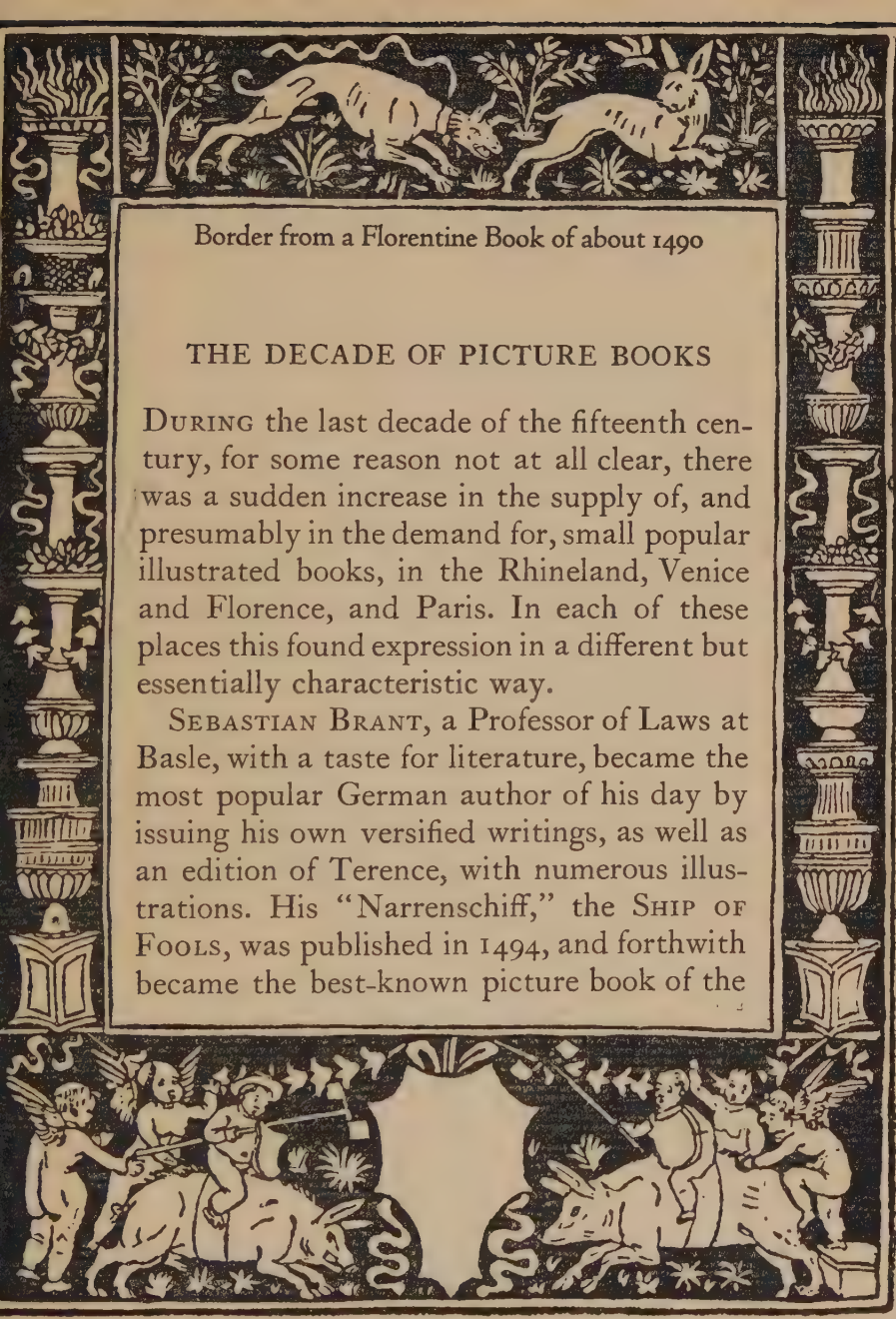
Woodcut pictures came into extensive use in Germany during the fourteenth century. Whether they were first used for saints or sinners is one of the questions that is not likely to be settled. Playing Cards entered Europe from Asia by any one of a dozen trade routes. They were quickly followed by persons who knew how to make them by taking impressions from a block of wood on which the design was cut, or else by daubing the figures through a stencil. Both of these methods had long before been used in China. The same methods were used to produce pictures of saints, for which a demand was created by the increasing number of worshippers at popular shrines. The artisans of the Rhine towns, as their income increased, took holidays more often and for longer periods, and the local ecclesiastical officials contributed to this practice by organizing pilgrimages to these holy places. The pilgrimages frequently enrolled a large percentage of the inhabitants of a town, who went off together for a trip which sometimes lasted several days. They became a characteristic feature of fifteenth-century life, and had an important social and intellectual, as well as religious, influence upon the people of northern Europe. Incidentally they led to a larger demand for the *heiligen*, or little pictures of saints. This was

met by using stencils and engraved wooden blocks to replace the rough sketches, made by hand, which the priests had formerly kept for sale. These pictures were produced in vast numbers; the fact that hundreds still exist in German libraries is evidence of the enormous quantity which must have been made.

Many of these pictures of saints have inscriptions, ordinarily a statement of the heavenly reward awaiting a faithful worshipper, the lettering being cut on the block as a part of the picture. Two of these inscriptions include a date, although in neither case is there anything to prove that this is when the picture was made. One, a Saint Christopher with the date 1423, has been known since 1769, when it was discovered pasted on the inside of the binding on a manuscript in the famous library of the Charterhouse at Buxheim, near Memmingen; it passed to Earl Spencer, and is now in the John Rylands Library at Manchester, England. This was the earliest known dated print until 1840, when a picture of the Virgin was found on the cover of an old box filled with ancient documents at Malines in Flanders, with the date 1418.

These pictures with lettering developed, quite independently of the invention of typography, into Block Books, in which each page was printed from a wood block on which the text and illustrations were engraved. The impression was taken by rubbing the paper, which was laid on the block after

spirit, as well as because they portray contemporary life, costumes, and ideas. Augsburg was the principal German city for the making of illustrated books, a succession of editions of the Bible in the vernacular with many small pictures being noteworthy. Ulm produced an important edition of Ptolemy's Cosmographia, with full-page maps of the known world, in 1482, reprinted in 1486. From other towns came a number of chronicles of universal history, with special attention to that of the locality where the book was to be sold. The vogue of these chronicles is a sign of awakening interest in the historic past and of a consciousness of national or racial continuity. This is even more evident in the popularity of a much less entertaining book, the Fasciculus Temporum, compiled by Werner Rolewinck of Cologne, a prolific literary worker of the time. Of this diagrammatic epitome of universal history, 33 editions were printed in Latin, German, French, or Spanish, between 1474 and 1500. In several of these the final paragraphs contain the latest news of importance, showing an editorial desire to keep the work up to date.



Border from a Florentine Book of about 1490

THE DECADE OF PICTURE BOOKS

DURING the last decade of the fifteenth century, for some reason not at all clear, there was a sudden increase in the supply of, and presumably in the demand for, small popular illustrated books, in the Rhineland, Venice and Florence, and Paris. In each of these places this found expression in a different but essentially characteristic way.

SEBASTIAN BRANT, a Professor of Laws at Basle, with a taste for literature, became the most popular German author of his day by issuing his own versified writings, as well as an edition of Terence, with numerous illustrations. His "Narrenschiff," the SHIP OF FOOLS, was published in 1494, and forthwith became the best-known picture book of the

A Fifteenth-Century Strike
from The Ship of Fools, Basle, 1497

time. It, and its 115 illustrations portraying all the phases of contemporary life, appeared in pirated editions at Nuremberg, Reutlingen, and Augsburg, before the year was out, and some 25 editions were

issued within the next fifteen years. Whatever dulness the author's moralizing may give this work is more than atoned for, to modern book-lovers, by the graphic style in which his artist epitomized the daily life of the time and its especial manifestations of universal human weaknesses.

The typical VENETIAN illustrated books of this decade contain small cuts inserted in the text at the beginning of each chapter or section. The printers had already perceived that the shorter line secured by placing two columns of text on each page of a folio book — the equivalent of the later newspaper column — was much easier to read than the long line the full width of the page. The interest of readers, and the sale of the books, were further stimulated by small pictures, the width of the column. The most famous book treated in this manner is the Malermi Bible, of which the first illustrated edition appeared in 1490, filled with pictures representing all the familiar biblical episodes. This Bible was repeatedly reprinted, and for more than half a century the illustrations reappear, one or more at a time, in countless other works, sometimes from the original wood blocks but more often in copies of varying excellence. Rivalling this as a popular publication were three editions of Dante's works. In these, as in other works similarly illustrated, many of the cuts contain two, three, or even four groups showing the same characters at successive moments

VIRGIL AND DANTE CROSSING THE STYX,
FROM A VENICE EDITION OF 1492

in the progress of the narrative — making these the earliest moving pictures.

HYPNEROTOMACHIA POLIPHILI, — or "The Strife of Love in a Dream" as the early English version has it, — by Francesco Colonna, is the closest rival to the Nuremberg Chronicle in perennial fame. A little less widely known and harder to procure, although not appreciably higher in price, its artistic qualities are much more highly esteemed by those whose judgment carries weight. It is an extraordinary

book from every point of view. There is nothing quite like it in contents, language, or illustration. It was printed by Aldus in 1499, but has no connection with anything else that he did. The author produced an archaeological romance written in a vocabulary in which the Italian, Latin, and Latinized Greek words mingle as promiscuously as his random ideas are inconstant. The work was apparently printed for a dilettante circle which appreciated the very best in book illustration. The 168 pictures, of varying size and unusual variety, are unexcelled for perfect suitability to their purpose — use with type. The woodcutter was as skilful as the artist, and both had an instinctive feeling for the precise weight of line and the balance of design which matches that of the accompanying page of text.

Florence was at first unfriendly to the earlier printers, for the wealthy merchants who set the fashions for the citizens preferred the beautifully illuminated manuscripts for which they were well able to pay. An effort was made to meet their desire for books that cost more than others could afford, by issuing the "Monte Santo di Dio" in 1477, and a Dante in 1481, with illustrations from copper engravings instead of the common woodcuts. Copper plates were used about the same time, more successfully, for the maps in Berlinghieri's version of the Geography of Ptolemy in *terza rima*. Woodcuts are printed with the type, whereas the metal en-

gravings require a separate impression and a different kind of printing, so that not only are they more costly, but the chances of error are greater. In the Dante, the second plate was used again for the third picture, and this blunder apparently put an end for a while to further attempts in this line.

Unheralded by anything of just the same sort elsewhere, the printers who had established themselves at Florence put out a succession of small illustrated tracts and booklets during the decade of the fourteen-nineties, intended for a large sale to the populace. There were two groups of these, similar in style. The first were the RAPPRESENTAZIONE, containing the text of plays portraying Biblical stories

or the lives of saints, each with one or more pictures. These plays continued on sale in frequent editions until late in the following century, the original cuts being used over and over again, for the most part with very slight traces of wear. The popularity of the earlier editions is one bit of evidence that the Florentine public was developing the state of mind which led to the outburst of evangelicanism, or the spirit of reform, which was inspired by the preaching of Savonarola. The impassioned friar drove home the lessons of his discourses by publishing the sermons and other religious tracts, with illustrations in the same style as those of the Rappresentazione. These pictured the preacher and his audience,

heaven and hell, the glory of God and of those who do worthily. The unconscious skill with which these unpretentious woodcuts convey their message has given them a high place in the annals of artistic expression.

The Book of Hours was the medium in which the Paris publishers made their great contribution to the history of book illustration during the quarter-century following the year 1490. The Livre d'heures, or Horæ Beatæ Virginis Mariæ, was the layman's manual of devotion through whose use the worship of the Virgin Mother of Christ gained a widespread impetus during the Middle Ages. The book came to be the work most frequently placed in the hands of artists and illuminators, who lavished on it their utmost skill. Copies decorated by the staff of artists maintained by Jean Duc de Berri, and those made for other members of the Valois family or for their cousins of England when the latter were dominant in Paris, are among the most desirable books ever made. The fame of these superb treasures, the perfection of the miniaturists' art, created a desire for similar books among those who were in the court circles. As wealth became general, more and more people who could afford to gratify their ambitions contributed to the prosperity of the makers of these illuminated books. The business of producing them became a very highly organized industry at Paris, employing hundreds of artists and subsidiary crafts-

men. It commanded the services of the most expert scribes and decorators from all over Europe, but chiefly from Flanders and northern France. Each of these brought to Paris his native style, and he continued to practise this in the metropolis, with more or less modification, to the confusion of the modern experts who try to identify places of origin by the artistic stigmata. The confusion is increased by the fact that the information implied by the names of special saints and holy days added to the calendar is equally deceptive, unless it is supported by other evidence. The fifteenth-century Paris bookshops kept these books in stock for sale to the foreign visitors who thronged to the city, and the buyer could have inserted at the shortest notice the names of his patron and name saints, or the days associated with his place of worship many leagues away, even across the Channel. At last, before the final decade of that century, the size of the business brought its own destruction. There was over-production, and the illuminated Horæ became so common that they ceased to be desirable and quickly passed from favor.

The demand for the Horæ, as a devotional manual, continued to be as great as before, and called to the printers to meet it. They did this, with the assistance of wood engravers who were as skilful in their way as the colorists in theirs. The book was issued with a full-page illustration at the beginning of each division, and with woodcut borders on every page.

This met with instant favor, and a dozen publishers entered into lively rivalry in the effort to supply the most attractive book in the new manner. Phili pe Pigouchet carried off the palm with an edition issued in August, 1498. Every page had its appropriate border composed of delicately executed miniature engravings on wood, or on metal handled the same way that the wood blocks were, each separated by set figures and ornamental designs, and varied by woodland and hunting scenes. This series of borders, which continued in regular use until 1502, is held in the highest esteem, but it is only one of several of very nearly equal merit, which appear in other editions, issued by Pigouchet or by his principal rivals, Simon Vostre and Thielman Kerver. Antoine Verard, who had a secure position as the fashionable purveyor of illustrated books to the court circle, and Jean du Pré, who printed books for the others, also issued editions, as did several minor publishers. The competition dropped after the turn of the century, and less care was taken to keep the pictures in their proper order. The various series of cuts became distributed among different printers, so that examples of the best period are occasionally found in later editions.

The Book of Hours, like the Book of Common Prayer, is one of the few works to which decoration may appropriately be applied without offending the stricter canons of fine book-making. It is a basic

principle that there must be nothing in a really good book which interferes with the attention of the reader. Decorations which distract by drawing the eye away from the text cannot be justified, except in a work which ought to be so familiar to the user that close attention to the print is unnecessary.

The Paris Horæ met with instant appreciation by an eager public, and they held the market for more than a quarter of a century. New editions came out at the rate of one a month. The list of the recorded editions compiled by Hanns Bohatta (Vienna, 1909) gives the titles of 170 issued for the use of the Diocese of Paris between 1490 and 1500. There must have been as many more with variant sections specially printed for the provincial dioceses. About 350 more are listed for the years 1500 to 1525. Signs of waning popularity begin to appear in cruder borders designed in different styles. Even the skill of Geofroy Tory, whose first edition appeared in 1525, could do no more than delay the inevitable change in taste. Their popularity fell off just at the time when public interest in the fundamentals of religion was being stimulated.

THE LEARNED PRINTERS

The New Learning began to lose its dominant position among the intellectual classes as the sixteenth century developed other and more spiritual interests. Its powerful influence continued to penetrate to other social classes and to the countries which were beyond the range of its earlier enthusiasms. The task of spreading this influence, and of preserving what cultural life had gained, was taken up by two families of printers, in Venice and in Paris. Each established itself upon a prosperous business built on a reputation for scholastic authority, and both ended by proving that learning alone will not meet the needs of the world.

Aldus Manutius went to Venice in 1488 for the purpose of promoting Greek studies by issuing better texts than had theretofore been obtainable. He had won the favor of the Roman family of the Carpi, while a tutor in its household, and this made possible his early success. His first book was in a type which he might have designed himself, but by 1494 he had secured another more carefully made. Having in mind the imperative necessity of producing books which should not be expensive, so that they might be within the means of many who longed to share in the knowledge of the ancient classics,

Aldus chose as the model for his Greek type a cursive hand, such as was used for ordinary purposes in writing. Before this, Greek books had been printed in types modelled on the square, inscriptional style of lettering used for ancient books. This made a beautiful and legible page, but each letter took so much space that the books were very costly. The cursive hand, as used currently, was compact, and its use for familiar correspondence, note-taking, and the like, had developed countless scribal short-cuts or abbreviations which took for granted that the reader had an intimate familiarity both with the language and with the subject of the writing. The commoner of these abbreviations were taken over by the printers. It was such a hand-writing that Aldus copied, sacrificing legibility to the need for cheapness. The type was enthusiastically welcomed as a great service to scholarship, and this initial popularity fixed it as the standard Greek type to the present time.

Aldus, before the end of the century, completed an edition of Aristotle's works in five folio volumes, carefully edited and printed. This effectively established his reputation in the learned world. Within the same five years he brought out a Greek Grammar, editions of Theocritus and Aristophanes, a Thesaurus Cornucopiæ and a Greek Dictionary, a Greek Psalter and a Greek Horæ.

Having accomplished his original purpose, Aldus

turned his attention to the Latin classics. He also married the daughter of a prosperous master-printer, Andreas Torresanus, whose interest in maintaining a good standard in his own work had been proved twenty years earlier, when he purchased the types of Jenson after the latter's death. After this marriage, and perhaps before, Aldus had the advantages of his father-in-law's establishment and advice. The first of his Latin classics was an edition of Lucretius in quarto, which came out in 1500. This was followed the next year by Virgil, Horace, Juvenal, Persius, and Martial, each in a format hitherto unheard of for a scholarly book. These were little books, octavos measuring about 6 by 4 inches. The success of the idea was immediate; the series became the "Everyman's Library" of that day.

Aldus placed the ancient classic authors within the reach of all, in editions prepared with scholarly skill, carefully edited, and accurately printed. Contemporary praise was effusive as well as sincere, and the authorities of Venice and the Papacy granted him their protection in the exclusive rights to his idea. Even more convincing was the flattery of imitation. The Aldine octavos, and the type which made them possible, were copied, so closely as to be almost indistinguishable, by more than one enterprising rival. These pirated editions appeared at Florence and at Lyons, and almost certainly also in Venice; it has been suggested that some of the

copies bearing the marks of Florentine or Lyonnese printers may have emanated from Venice, while the foreign printers omitted any sign which would call attention to the fact that the books were not genuine Aldines. Aldus was moved to print a circular letter protesting strongly against the injury caused by these piracies. Not only did they lessen his sales, but the purchasers suffered more than they gained by the lower price, because the only things his rivals did not copy faithfully were his textual and typographical accuracy. He pointed out some of the more absurd misprints; the immediate result of this was that the pirate printers reprinted the offending pages, so that their remaining copies did not have the identifying stigmata.

The type which made the octavo editions possible was an adaptation of the idea which had already made his Greek books a success. It was modelled on the cursive handwriting in current use, and according to one statement the letters were copied directly from a manuscript of Petrarch's writings. This type was at first called "Venetian," or "Italic" in other countries, and the latter name has clung to it. It is much more compact than the roman type, and more pleasing on first acquaintance; but the judgment of time has been against it for ordinary use.

In the summer of 1502 Aldus adopted, as a mark by which his editions might be recognized, the anchor and dolphin, the first signifying surety and the

other speed. This mark, as well as the Aldine name, won a contemporary fame which has never lessened during later centuries. There is no name connected with printing which is to-day as widely known as that of Aldus. He has been, fittingly, the model chosen most frequently by publishers as their ideal, and for many decades there has been a succession of bookmakers whose especial claim to distinction is that each announces himself as a "Disciple of Aldus." The Aldine mark is equally the best known printer's device; unnumbered successors in the industry have copied it directly or with modifications as the mark which is associated in widespread popular estimation with good books well printed.

The Italian classics, beginning with a Petrarch in July, 1501, took their place alongside the Latin in the octavo format. Dante followed a year later, in August, the second book to carry the anchor and dolphin. Greek books continued to take about half the time of the press, for the most part in larger sizes, but a Sophocles in octavo appeared the same month as the Dante, and a Homer in two small volumes was finished late in 1504.

For nearly three years the little volumes were published at the rate of about one a month. Then the French troops entered Italy again, and the printers did little more than complete the works already in hand. From December of 1506 until December of 1507, and again from April, 1509, to October, 1512,

De l'empia Babilonia; ond'è fuggita
Ogni uergogna, ond'ogni bene è fori;
Albergo di dolor, madre d'errori
Son fuggit'io per allungar la uita.
Qui mi ſto ſolo; et come amor m'inuita,
Hor rime & uerſi, hor colgo herbette et fiori
Seco parlando, et a tempi migliori
Sempre penſando; et queſto ſol m'aita:
Ne del uulgo mi cal, ne di fortuna,
Ne di me molto, ne di coſa uile;
Ne dentro ſento, ne di fuor gran caldo:
Sol due perſone cheggio; et uorrei luna
Col cor uer me pacificato e humile;
L'altro col pie, ſi come mai fu, ſaldo.

In mezzo di duo amanti honeſta altera
Vidi una donna, et quel ſignor con lei,
Che fra gli huomini regna et fra li Dei;
Et da l'un lato il ſole, io da l'altr'era.
Poi che s'accorſe chiuſa da la ſpera
De l'amico piu bello; a gliocchi miei
Tutta lieta ſi uolſe: & ben uorrei,
Che mai non foſſe inuer di me piu fera.
Subito in allegrezza ſi conuerſe
La geloſia, che'n ſu la prima uiſta
Per ſi alto aduerſario al cor mi nacque:
A lui la faccia lagrimoſa et triſta
Vn nuuiletto intorno ricouerſe;
Cotanto l'eſſer uinto li diſpiacque.

From the Aldine Petrarch of 1501

nothing is recorded in the lists of Aldine imprints. Like many of his colleagues, no doubt, Aldus spent his time trying to collect what was due from his correspondents in other cities. During 1508 the workmen were kept occupied by two large volumes, the Adagii of Erasmus, with 276 leaves, and the first volume of Rhetores Graeci, with 375. These were followed in November of this year by an octavo Plinius Secundus, the first complete edition of the Epistles, from an ancient manuscript which a Venetian ambassador had brought to him from Paris.

The name of ANDREAS TORRESANUS DE ASULA appears in the colophon of the 1508 Pliny for the first time as a partner of Aldus. This suggests that some financial rearrangement had become necessary, or else that the health of Aldus was failing, for the two names continue until the latter's death in April, 1515. Torresanus then assumed the direction of the establishment, assisted by his two sons, and retaining the phrase "In aedibus Aldi" in the imprints. They maintained the reputation of the press for excellent printing, if they could not add to its standing among scholars.

After Torresanus died, in 1529, all book-making ceased until 1533, when PAUL MANUTIUS, the son of Aldus, came of age. He at once entered upon a life-long effort to renew the prestige of the press. He sought out his father's old friends whose gatherings had made the Aldine house the literary centre of

Venice, and tried to interest his own scholarly contemporaries in the attempt to stave off the decadence of the city. He bought new fonts of type; where Lyons and Paris had copied his father, he now sent his commissions to the famous French type designer Claude Garamond. It was a losing struggle, and his own real interests were elsewhere. The family tradition made him a scholar even more than a printer. The five years from 1556 to 1561 were devoted to a proposed "Academia della Fama," which was to draw to Venice the most learned men who could be attracted by generous patronage, from all the world; then the merchant who had promised an endowment failed, but not before it had been demonstrated that much more besides money is needed to make such a plan successful. The printer was called to Rome by Pope Pius IV, to undertake an equally ambitious plan for printing everything which it was desirable that the faithful should read, with the revisions made necessary by the decrees of the Council of Trent. Once more it proved easier to promise money than to provide the time which such an undertaking requires.

The second Aldus Manutius, born in 1547, was placed in charge of the Venice establishment in 1565, and spent much of the ensuing decade until the death of his father, Paul, in 1574, trying to make some profitable arrangement by which it might be carried on by more experienced manage-

ment without loss of the inherited prestige. Even his marriage to an heiress of the famous printing family of the Giuntas of Florence did not bring successful direction to the Venice business. The younger Aldus was even more famous than his father for great learning. He was an infant prodigy for erudition, and it was said that he edited, or helped his father to edit, the Epistles of Cicero, at the age of twelve. After 1576, having leased the right to use the press and the famous trade-mark, he devoted himself to the more congenial profession of teaching Belles Lettres. He died, the last of the family, in 1597. Hailed as the most learned man of his time, he lived too late; learning had become erudition, and the Renaissance had given way to the modern world.

THE PATRONS OF PRINTING

When the French troops occupied northern Italy at the beginning of the sixteenth century, Jean Grolier accompanied them as the financial representative of the royal treasury. He came of a family of Italian bankers, settled at Lyons, and made his own prosperous career in official positions, rising to the dignity and responsibility of treasurer to the Crown. He was also, for more than half a century, the greatest collector of his time, the sixteenth-century successor to the earlier Medici. He established a reputation in bookish circles as the model for book-collectors. This rests upon two characteristics, a generous patronage of the book-makers who were producing fine work, and the most careful treatment of his possessions. The bindings with which he had his books covered are so famous that there is a common misconception that he was himself a book-binder. He maintained a staff of craftsmen in his own palace, employing the most skilful artisans, who developed the characteristic designs which have come to be known as Grolieresque. The typical feature of these is the interlacing of ribbons of various harmonious colors to make a design or border on the sides of the bindings. Similar designs were executed by other binders for other patrons,

especially in Italy, and they have been copied with great skill and remarkable ability in giving the appearance of sixteenth-century workmanship. Grolier's own books sometimes contain his motto, and the friendly inscription "J. Grolierii et amicorum," and this is more frequently found stamped at the foot of the binding. The phrase was not his alone, for it is also found on the bindings executed for two contemporary collectors, Thomas Maioli of Asti and Marc Lauwrin of Bruges.

Grolier, while his headquarters were at Milan, became acquainted with Aldus and established a lifelong friendship with his family. He kept informed about what the press was doing, and had a standing order for several copies of each important book, on vellum or on extra fine paper if possible. He also commissioned work to be done on his own account. Aldus in turn dedicated books to the patron, expressing his appreciation in the prefatory epistles. This was the most famous of these friendships, but Geofroy Tory and others of the Paris printers were equally in his favor.

The name of an owner occurs on bindings much less frequently than the crest or coat of arms, or a personal device. These go with special bindings, which were customary when books were ordinarily kept in stock in sheets, to be bound when sold, so that this did not imply the destruction of an original cover except in the case of older manuscript works.

The use of a bookplate as a sign of ownership, also, had already begun. The earliest known may even be older than typography, for it has the name of the owner, Hans Igler, cut on the block with a crude design much like the little woodcut pictures of saints.

Hildebrande Brandenburg established a noteworthy place for himself in bookish annals by inserting an attractive plate, an angel holding a shield with the family arms, in the books that he gave to the Carthusian monastery at Buxheim toward the end of the fifteenth century. The library of this house was dispersed during the French Revolution, and volumes containing this plate are now widely scattered amongst appreciative collectors. The earliest dated plate is a woodcut designed by Albrecht Dürer in 1516 for Hieronymous Ebner. Another Dürer plate is even more famous, executed on copper in 1524, with the portrait of the owner, Bilibald Pirckheimer. He was a Nuremberg jurist, who became councillor to Maximilian I, and maintained an active correspondence with the leading humanists of his time. He also had another Dürer plate, and a third one by another designer. Some twenty armorial designs are listed as Dürer's which may have been used as bookplates, and there are similar engravings credited to Lucas Cranach, Jost Amman, and Hans Trochsel.

CONFLICTING TENDENCIES AT PARIS AND GENEVA

The Estienne family at Paris was a rival to that of Aldus for three generations, along closely parallel lines. The first Henri Estienne, Étienne, or Stephanus, acquired an active business in 1501 when he married Guyonne, the widow of Jean Higman. Higman had established a strong University connection, and this was broadened by his successor. For twenty years Estienne printed solid works on theology and philosophy, and orthodox scientific treatises, edited by the leading professors of the Sorbonne. His son Robert set up for himself in 1525 through an amicable arrangement with his stepfather, Simon de Colines, who has taken Estienne's place as the third husband of Guyonne and the manager of the printing establishment.

Robert Estienne was a good printer, and a scholar of distinction who took an important part in bringing the Renaissance to France. The story is that, when he was asked to reprint the standard Latin Dictionary of Calepin, he found that this was so far behind the movement of linguistic scholarship that he decided it would be easier to make up a new work than to correct the errors in the old one; and as he could not find anyone to do this to his satisfaction, he prepared the new one himself. This

"Thesaurus linguae Latinae" occupied him for nearly two years, appearing in 1532, when he was thirty years old. His wife was the daughter of BADIUS ASCENSIUS, the most noted editor of that time, whose works were recognized as authoritative and enjoyed a wide sale throughout Europe. Badius was provided with a press in his own house, so that he might direct the printing of his publications and secure the utmost accuracy with an economy of time and effort. The books from this press, known as the Praelum Ascensianum, are still in demand, less for the learned editing than because of the printer's mark, which is a view of a printing shop giving one of the earliest representations of a press in operation.

Robert Estienne began his career by revising the text of the New Testament exactly as the scholars of his day were dealing with other ancient texts. He based his work on the original versions which had been made available in the famous COMPLUTENSIAN POLYGLOTT edition, issued under the auspices of Cardinal Ximenes at Alcalá in 1514–1517. Except for the Psalter published by Giustiniani at Genoa in 1516, — with the text in Hebrew, a literal Latin rendering, the Latin Vulgate, the Greek Septuagint, Arabic, and Chaldee, — the monumental Spanish work was the first edition of the Scriptures which recognized that the accepted versions were merely translations from older and more authorita-

tive texts in other less familiar languages. This implied a recognition of the fact that the accepted versions were subject to corrections which might alter the meaning or the significance of passages which the movement of the Reformation had already made subjects of controversy.

Violent protests were at once voiced at the Sorbonne against the audacity of Robert Estienne, a mere lad, in issuing his highly controversial revision of Holy Writ, and in printing it in octavo, the undignified format of books intended for sale to the many. Estienne met this challenge by completing his textual examination of the rest of the Bible. He published the first of several complete editions in 1528. The officials of the Sorbonne threatened extreme measures to suppress his activities, but the French Crown protected the printer, in part perhaps because he was doing the Court circle a real service by distracting the attention of the theologians from others in high station whose opinions were tending away from traditional orthodoxy. When the controversy became more annoying, in 1534, Francis I issued a peremptory order forbidding all printing. This produced another unexpected trouble, for the Parliament refused to register the decree. A revised order, forbidding the printing of new books, met the same refusal, and when the King accepted the situation, the first move had been won in the struggle for the FREEDOM OF THE

Press. It was a very limited freedom according to modern ideas, but of fundamental importance as recognizing a principle. Francis I died in 1547, and soon afterward Robert Estienne left Paris under the protection of the friendly Bishop of Meaux.

Geneva welcomed the printer who had championed the fundamentals of the reform movement; but Estienne soon found that it was easier to combat the unified hostility of his Parisian enemies than to make a living trying to please the highly individualistic groups of religious innovators who congregated at the centre of Calvinism. His last decade of unimportant work ended with his death in 1559.

A second Henri Estienne, son of Robert, born in 1528, began collating ancient manuscripts before he was twenty. Primarily a hellenist, he began his career as a printer in 1557 at Geneva, by bringing out editions of five Greek authors who were virtually inedited, which is evidence that they were authors for whose writings there was no demand. For the next decade he was subsidized by a cadet of the family of Fugger, the great Augsburg merchant house. In 1569 he issued a printed circular letter to his correspondents, explaining that his failure to answer letters was due to the fact that since 1562 he had been preoccupied by the task of keeping two presses busy printing a Greek Thesaurus compiled on a new method. This appeared in 1572. Before

there was time for any general sale, a compact abridgement containing all the essential novelties of the compendious work was put on the market by Estienne's assistant and proof-reader, Jean Scapula. Scapula claimed that he had urged Estienne to issue this himself, but the latter foresaw its inevitable effect upon the larger work, and refused to do it. Scapula had it printed elsewhere; and the sale of the Thesaurus scarcely met the bills for paper. Estienne spent most of his remaining years travelling from fair to fair all over Europe, seeking buyers. In 1598 he died, alone, in the city hospital at Lyons. His daughter married Isaac Casaubon, through whom the scholarly inheritance of the Estiennes passed to England.

THE END OF THE MANUSCRIPT TRADITION

In 1521 the first Henri Estienne died and Simon de Colines became the widow's most distinguished husband. He maintained the former prestige of the printing house as a resort for learned men, rivalling in this the Aldine "Academy" at Venice. He added to the fame of the press for its correct and authoritative texts an even greater reputation for elegant typography and beautiful press-work. Its long list of publications already included several groups of books on closely related subjects. Colines developed these into definite series. He issued them with new woodcut designs for the title-pages, carefully using the same style for all the books in a series, so that they could be easily recognized by purchasers.

Simon de Colines's greatest contribution to the fame of the establishment came when he recognized the genius of Geofroy Tory and employed him to design decorations for its books. Tory had been a professor of philosophy and the classics and a student of geography before he gave himself up to an overpowering desire to express himself artistically. In later years he became a printer on his own account, a reformer of the French language, and an innovator in its alphabetic symbols. He brought about the abandonment of the traditional black-

letter type in favor of the modern roman letter; he introduced the ç, and gave a tremendous impetus to self-consciousness among the French printers, leading them to consider their responsibility for the contents as well as the appearance of the books on which they put their names.

Geofroy Tory's claim to genius, as the greatest of all decorators of typography, rests upon the ornaments that he designed while he was in the service

of Colines, and subject to his directions and criticism. These consist of title-borders, printer's marks, headbands and tail-pieces, and of several series of initial letters for use at the opening of chapters and of sections of the text. For perfect adaptation to their purpose and for unquestioned appropriateness

and effectiveness in the places for which they were intended, the designs of these wood blocks have not been surpassed. The highest praise that could be paid to Bruce

Rogers, when Alfred W. Pollard described him as the finest modern bookmaker, was to style him the reincarnation of Tory. Tory's designs were never printed as perfectly in his own time as they were in the Riverside Press edition of Auguste Bernard's Life of Tory, produced by Rogers in 1909.

Tory and Colines demonstrated to the Parisian book-buyers that a well-made, thoughtfully planned commercial book could be a beautiful thing. The standards which they set governed the ordinary output of the better Paris printers for the ensuing half-century. With less of genius but with quite as sound an instinct for the fundamental qualities that make a book good, several printers gave to their productions a quality which has profoundly influenced the best book-making of the twentieth century. The essential thing about the books that bear the imprint of Michel Vascosan, Robert Granjon, Federic Morel, and Jean le Royer of Paris, and of the Jean de Tournes, father and son, and Claude Paradin of Lyons, is that they are distinctly modern in their more important characteristics. They owe nothing to the mediaeval traditions of book-making. These French printers have been studied more comprehendingly by Daniel Berkeley Updike than by anyone else; to them is due no small part of the inspiration which makes the Merrymount Press preëminent.

THE END OF THE ERA OF THE MASTER PRINTERS

The Era of the Master Printers ended with Christophe Plantin. Since his time there have been many great masters of printing establishments who were practical craftsmen, some of whom, like the two Charles Whittinghams, have profoundly influenced the development of book-making. Before Plantin, from the days of Koberger and of the early Venetians, there had been owners of printing plants whose business ability made them sellers rather than makers of books. But it was the Master, exercising a direct oversight of the activities of compositors, pressmen, and binders, who gave to the industry its characteristic features down to the later decades of the sixteenth century. After 1600 the publisher dominated the craftsman.

Antwerp, the capital of the Spanish Netherlands, was supplanting Venice as the world's shipping metropolis before 1550. The printers already controlled one quarter of the town, and had begun to rival the Italians as purveyors of books, without taking anything away from the older city. The social and economic changes of half a century had doomed the books — treatises on the Canon Law, the Church Fathers, mediaeval medical works, editions of the ancient Classics made authoritative by the names of famous scholars — which were still the

backbone of the Venetian book trade. Instead of these books, which appealed to those who longed for culture and learning, hundreds of Antwerp workmen were prosperously employed in making books which were intended to entertain the readers. They were printed in every European language, in quantities as much larger than the editions of those other more respectable works as they are now more difficult to find. Rarely does the hunter through the old bookshops come upon an Antwerp sixteenth-century imprint; and when he does, he may not recognize it, for the title-page is apt to say that it was printed at Paris or Philopolis or some equally improbable locality.

Christophe Plantin was a young French bookbinder seeking his fortune when he went to Antwerp in 1549. He made his way to recognition by the court officials, until an injury forced him to abandon his trade and take up the lighter physical labor of printing. By 1559 he had won a position which gave him the commission for printing the monumental volume containing the official record of the ceremonies attending the funeral of Charles the Fifth. This led to other similar tasks executed for the government, which gave him contemporary fame, and eventual bankruptcy. He built up a sound business, and prospered whenever he was free to attend to this. But like many another, the fascination of doing a grand book was more than he

could resist, and then as always it was impossible to do the monumental volume, to his own critical satisfaction, without exceeding the amount which seems proper to a layman unfamiliar with the time and attention imperatively demanded by a piece of fine printing.

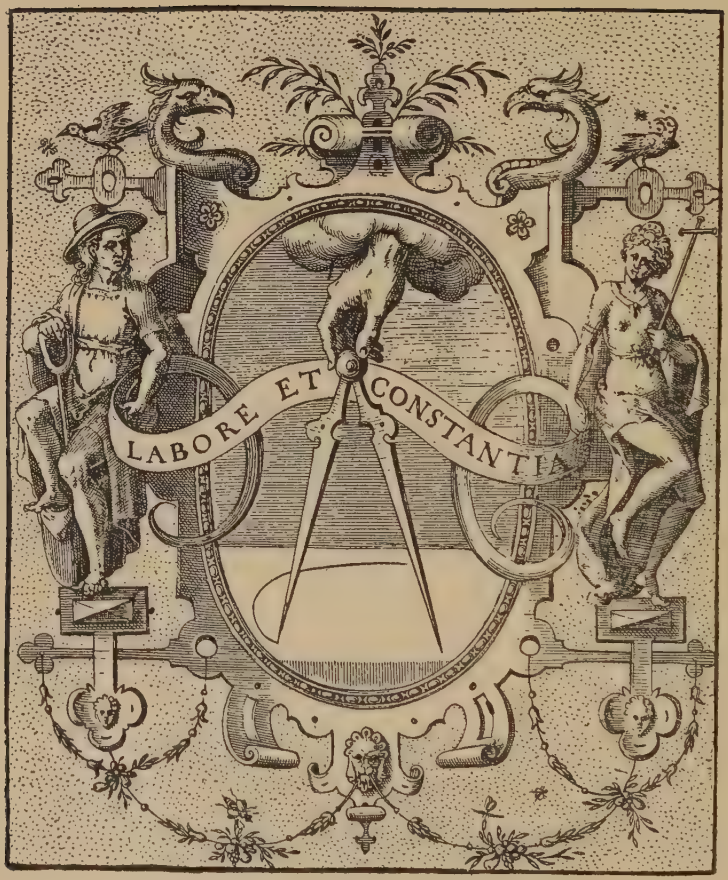
Plantin's grandest idea became a reality through the assistance of Spanish ecclesiastical and court officials. Fifty years before, another Spaniard, Cardinal Ximenes, had fostered the first Polyglott Bible. This had long been unprocurable by scholars, and Plantin proposed to issue a more adequate work which should include the texts of the Holy Scriptures in all the languages from which they are derived. Philip II became interested in the idea and promised to subsidize it. The royal promises were ample to justify the venture; but the royal treasurer had many other claims upon the funds in hand, and with the best of intentions, Philip was unable to do all that he meant to. Plantin began by training a special staff of workmen. A Hebrew Grammar was printed to familiarize them with this language, and when he found a satisfactory proofreader, he married him to a daughter, that there might be less danger of losing him. New fonts of type were ordered from Robert Granjon of Lyons and Claude Garamond of Paris. The initial order for paper called for 3000 reams, and 400 dozen skins were ordered for the vellum copies.

Sample pages of the Polyglott, with the text in four languages, were shown at the Franckfurt book fair in 1566. There was talk of a rival work under Lutheran auspices, with the Elector of Saxony as patron, but it was obvious that the effort to print the two would be suicidal for both. It was this danger — that the undertaking might be contaminated by Protestant influence — which helped to convince Philip II that it must be done under Spanish control. By midsummer of 1568 the specimen sheets had received final approval, and a few months later the work started. Forty workmen, with two, and later four, presses, were kept steadily employed for three years. The edition was 1200 copies, on paper of four different sizes, and thirteen copies on vellum for the King. The number of volumes in which it was bound varies from six on the ordinary paper to eleven for those on vellum. It was completed in 1572.

Plantin's Polyglott Bible is still unrivalled as a printer's achievement. But the printer had to pay his workmen in order that the work might not stop, and when the remittances from the Spanish treasury did not arrive, he had to turn to a public-spirited Jewish money-lender, Louis Perez, who must have known how precarious was the security. The King endeavored to help the situation, and made it worse by ordering a series of large service books which he thought of presenting to each

church in the kingdom. This did not please the printers of Spain, who made their influence felt, and the plan was given up after Plantin had committed himself to further heavy expenditures. A more tangible reward was a royal grant giving him a monopoly for printing the authorized service books for the Spanish domains.

Plantin died in 1589, and the business passed to a son-in-law, Jean Moretus, who had advanced money to keep it going. Abandoning all other lines, Moretus and his successors devoted their attention to the monopoly of service books. The mark of the compass was no longer found on handsome books, but the profits of the establishment steadily accumulated. The business remained in the family and was carried on in the original Plantin house until 1876, when the city of Antwerp and the Belgium government united to purchase it as a public museum. Plantin was a sound business man in principle if not always in practice, keeping all of his account books carefully and preserving his correspondence. These documentary records supplement the actual presses, fonts of type, and cases filled with woodblocks and metal cuts, with the desks of the proofreaders and the incidental paraphernalia of a sixteenth-century printing office, all together making this museum the most significant and instructive of printing meccas.



Printer's Mark of Christophe Plantin

DATE DUE

		MAR 0 9 2005	
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MAR 2 6 1982			
	AUG 3 0 1982		
AUG 2 1 1983			
MAR 3 1 1990			
MAR 2 7 1993			
	MAY 0 4 1994		
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